

ABSTRACT

The object of the present invention to provide a reaction apparatus that is simple in structure and performs a desired reaction at high CO selectivity with restricted side reactions, especially a CO remover that performs a selective oxidative reaction of CO at a high CO selectivity. For this purpose, the CO remover of this invention includes an air mixer for mixing air with hydrogen-rich gas including carbon monoxide and a selective oxidative catalytic device in which a selective oxidative catalyst bed is formed by filling selective oxidative catalyst into a gas passing tube. The selective oxidative catalytic device includes a gas blending unit for blending gas passing through the central part of the gas passing tube with gas passing through the peripheral part at a point in the selective oxidative catalyst bed in the direction of gas flow. As a result, the reaction apparatus and the CO remover have simple structures. In addition, gas passing through the central part upstream is blended with gas passing through the peripheral part upstream to uniformize the temperature of gas in the gas blending unit, so that high CO selectivity is obtained.

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